

# Whole Grain Roll

Makes: 100 Servings

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Ingredients	Weight	Measure
White Whole Wheat Flour	3 lb 10 oz	
All-purpose flour, enriched	3 lb 6 oz	
Instant non-fat milk, dry	7 oz	
Granulated sugar	11.5 oz	1 ¾ cup
Instant dry yeast	3 oz	½ cup
Salt	1.75 oz	2 Tbsp 2 tsp
Vegetable oil		1 2/3 cup
Water	4 lb 5 oz	2 qt ½ cup
Non-stick cooking spray	As needed	

## Directions

1. Place flour, dry milk, sugar, yeast, and salt in mixer bowl.
2. Blend with dough hook for approximately 2 minutes on low speed. Add dry milk.
3. Add first amount of water to the dry ingredients. If dough appears too stiff, add up to 1 cup extra water per 100 servings. More or less water can be added as needed. Mix for 1 minute on low speed or until all water is mixed with the dry ingredients.
4. Knead dough on medium speed for 8-10 minutes until dough is properly developed. Use the gluten stretch test. (At 8 minutes, stretch the dough like a rope. If it breaks, continue to mix 2 additional minutes).
5. Form dough into 2 lb balls and spray with non-stick cooking spray or cover with plastic wrap. Once all dough balls have been formed, begin shaping.
6. Form rolls from dough by pinching off 2 oz pieces and shaping. Place rolls in rows of 7 across and 10 down on sheet pans (18" x 26" x 2") which have been lightly coated with non-stick cooking spray.
7. Place in a warm area (about 90°F) until double in size, approximately 45-60 minutes.
8. Bake until lightly browned: Conventional oven: 400° for 18-20 minutes Convection oven: 350°F for 12-14 minutes
9. Recommended internal temperature for baked whole wheat rolls is 196-198°F.
10. Rolls will have a better appearance if lightly sprayed with non-stick cooking spray when they come out of the oven.

## Notes

### Additional Tips

Dough made with whole wheat flour will absorb more water and requires increased rising/proofing time. Mixing time is

less because the bran from the whole grain cuts through developing gluten strands with increased mixing, resulting in a product with low volume. Even an additional one minute mixing time with whole grains can make a difference in quality. Figuring water temperature so that the final dough temperature is about 80° is essential for quality bread products.

**Source:** Iowa Gold Star Cycle Menus, Team Nutrition Iowa